Reviews and Book Notices

Miocene Foraminifera from the Monterey Shale of California, with a Few Species from the Tejon Formation. By Rufus M. Bagg, Jr. (U. S. Geological Survey, Bulletin No. 268, 1905.) Pp. 55, 11 plates, 2 figures.

The Monterey Shale is 2,000–2,500 feet thick where the fossils were collected. This was near Asuncion, in San Luis Obispo County. The collecting was done by Professor Branner, of Leland Stanford University, who also wrote an introduction to the *Bulletin*.

The formation as a whole lies in a broad fold, but there are smaller folds and numerous faults. The bulk of the shale is made of diatom skeletons.

Dr. Bagg finds sixty-six species and seventeen genera in the collection. Most of them are common in the North Pacific today, so that conclusions may be drawn as to the temperature and depth of the water where these sediments were deposited. The water was probably less than 500 fathoms deep. E. W. S.

The Lead, Zinc, and Fluorspar Deposits of Western Kentucky. By E. O. Ulrich and W. S. Tangier Smith. (U. S. Geological Survey, Professional Paper No. 36, 1905.) Pp. 218, 22 plates, 31 figures.

The geology and general relations of the deposits are discussed by Mr. Ulrich and constitute Part I of this paper; the ore deposits and mines are described by Mr. Smith in Part II. The region has been subjected to abundant faulting, and the surface is quite rough and irregular on that account. The deposits are somewhat similar to other deposits of similar ores in the interior of the United States, but there are a number of unique features in lithologic and mineralogic associations. One of these is the presence of basic igneous dikes. Another is the abundance of fluorspar, especially where the lead and zinc ores occur. Thirdly, the ores are found principally in true fissure veins, which have resulted from fracturing and subsequent faulting.

The minerals of economic importance are fluorite, barite, galena, sphalerite, and smithsonsite. In addition, there occur cerussite, pyromorphite, sulphur, hydrozincite, calamine, greenockite, chalcopyrite,